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A NEW SPECIES OF *STACHYRIS* BABBLER (AVES: TIMALIIDAE) FROM THE ISLAND OF PANAY, PHILIPPINES

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ABSTRACT.—*Stachyris latistriata,* sp. nov., is described. It is known only from the mountains of Panay in the central Philippines, where it occurs commonly in montane forests above 1000 m. Notes on its behavior, breeding condition, nest and vocalizations are presented. It is a member of the superspecies *Stachyris* [*striata*] which contains three other Philippine endemics. *Received 7 March 1990, accepted 6 April 1990.*

The ornithology of the island of Panay in the central Philippines perhaps is the least known of the main islands of the Archipelago. Although Sonnerat (1776) first visited Antique, Panay in 1771, more than a century passed before other collections were obtained from the island by the Steere Expeditions in December 1874 (Sharpe 1876, 1877) and January 1888 (Steere 1890) and by the Menage Expedition (Bourns and Worcester 1894) in November 1890. A few additional collections were made in the earlier part of this century by Anderson between 1901 and 1912, by W. Cameron Forbes in March 1913 and again in August 1921, by McGregor (1921) in 1918, and by Manuel in 1933. For the most part these parties visited lowland areas, leaving the higher elevations of the rugged mountains bordering the west coast of the island virtually unexplored.

Since so little work had been done on Panay and because the original lowland forests on the eastern side of the island have for the most part been destroyed, recent collectors and naturalists visiting the Philippines have ignored it.

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Fortunately, in February and March 1987 a team of collectors led by Rogelio Sison from the National Museum of the Philippines (NMP) set out to determine the status of the endangered deer *Cervus alfredi* in the remaining forests of Mt. Baloy, which lies at the junction of the provinces of Antique, Capiz, and Iloilo in west central Panay. During their study, they also collected 77 bird specimens. One of the specimens mist-netted in montane forest was an unidentified bird that clearly belongs in the babbler genus *Stachyris*. We compared the specimen to other members of the genus, particularly the Luzon Striped Babbler (*Stachyris striata*) from Luzon and the Negros Striped-Babbler (*S. nigrorum*) from Negros, and concluded that it represented a new species. However, with only one specimen in hand, we decided that a larger series was needed before we could describe the species. This gave rise to the National Museum of the Philippines/Cincinnati Museum of Natural History (NMP/CMNH) Expedition that departed for Mt. Baloy on 25 September 1989 and stayed on until 19 October 1989. On this expedition, we obtained a series of 35 specimens (skins with trunk skeletons—7 ♂, 6 ♀; skins alone—11 ♂, 7 ♀; fluid-preserved specimens—1 adult, 2 nestlings; whole skeletons—1 ♀; frozen tissue from 6 ♂, 4 ♀) of the new taxon, plus additional birds, mammals, reptiles and amphibians and other terrestrial and freshwater animals. This rather large series of new material added support to our earlier conclusion and here we describe and name the new species as:

Stachyris latistriata, sp. nov.

PANAY STRIPED-BABBLER

HOLOTYPE.—NMP 16663, female (with skull 75% ossified, ovary measuring 6 × 4 mm, and the presence of a brood patch), collected 7 October 1989 at an elevation of 1530 m, 11°8′N, 122°14′E, 1.1 km south southwest of the peak of Mt. Baloy, Barangay San Agustin, Municipality of Valderrama, Antique Province, Panay, Philippines by the National Museum of the Philippines/Cincinnati Museum of Natural History Expedition, field number 2048.

DESCRIPTION OF HOLOTYPE.—Lores pale Cream Color 54 (capitalized color names and numbers are from Smithe 1975, 1981) grading into cream white in lower superciliary, auricular, and malar region; band of black on the forehead extending into the forecrown, upper superciliary and looping behind and below the auriculars; eye-ring cream white; crown and nape Greenish Olive 49 a shade darker than the back, which becomes lighter toward the rump; upper tail coverts rusty olive; tail dark Greenish Olive with a tinge of rust; edges of the rectrices have the same color as back; primaries Sepia 119 with pale yellow outer edges; secondaries dark Olive Green 48 with outer edges same color as the back and inner edges pale yellow; spot distal to bend of wing light Sulphur-Yellow 57; chin and upper throat cream white; lower throat light Sulphur Yellow becoming Buff-Yellow 53 on breast and belly; flanks including shank features Greenish Olive; broad black streaks beginning on throat, most prominent on breast, fading to dark Olive Green on belly and under tail coverts. Soft part colors of the living holotype 1 h after capture as described by artist John Ruthven, "Eye bright rust, outer edge lighter grading to bright rust toward pupil; eye-ring pale horn;

FIG. 1. Side view of the holotype of *Stachyris latistriata* photographed less than 30 min after it was captured on Mt. Baloy.

bill with upper mandible dark horn, deeper at base and pale horn at cutting edge; lower mandible dark horn at the tip grading to light horn toward the cutting edge; gape pale horn with greenish overtone grading posteriorly to dull ochre then pale flesh; tongue pale horn at tip grading posteriorly to pinkish white; under-tongue pale flesh; legs and feet bluish olive; toe pads medium chrome yellow fading to lighter on edges; nails horn, darker on ridge." (See Figs. 1 and 2).

PARATYPES.—NMP 16358, collected 6 March 1987 from Mt. Baloy, Iloilo Province, Panay at an elevation of 3300 ft (ca 1000 m); and NMP 16664–16677 and CMNH 34211–34226, all collected from 7 to 13 October 1989 at elevations from 1530 to 1540 m at the type locality.

PARATYPIC VARIATION.—Overall colors vary from slightly darker to slightly paler than the holotype. There is variation in the intensity of color of the black streaks, which normally are confined to the breast but may occasionally (especially in males NMP 16358, 11673 and CMNH 34211, and female CMNH 34226) extend onto the belly. The black patch on the forehead and forecrown also varies in some specimens (particularly males NMP 16664, 16677, and female NMP 16675) with black feathers extending onto the crown just posterior to the eyes. Plumage variations seem to be individual and do not reflect the sex or age of the specimens in the series. The sexes are different in size, with males significantly (two sample t-test, $P < 0.05$) larger than females in weight, length of culmen, bill width and tarsus length, and highly significant ($P < 0.01$) in wing chord. Differences in tail length and distance from the bill tip to the nostril were not significant.

MEASUREMENTS.—Holotype: wing chord 70.0; tail 53.5; tarsus 24.2; culmen 20.9; bill width at feather line 5.8; bill-tip to anterior edge of nostril 11.6. Males: wing chord (19)

FIG. 2. Frontal view of the holotype of *Stachyris latistriata* photographed at the same time as Fig. 1.

71.0 ± 1.56, range 68.6–75.2; tail (18) 55.4 ± 1.50, range 53.1–58.4; tarsus (19) 24.3 ± 0.62, range 23.1–25.5; culmen (19) 21.2 ± 0.51, range 20.1–22.0; bill width at feather line (19) 6.0 ± 0.32, range 5.4–6.7; bill tip to anterior edge of nostril (19) 11.4 ± 0.52, range 10.3–12.1. Females: wing chord (13) 69.2 ± 1.35, range 67.3–72.5; tail (12) 54.8 ± 1.61, range 53.3–58.7; tarsus (12) 23.8 ± 0.51, range 22.7–24.6; culmen (13) 20.9 ± 0.42, range 20.3–21.6; bill width at feather line (13) 5.7 ± 0.34, range 5.3–6.4; bill tip to anterior edge of nostril (13) 11.4 ± 0.31, range 11.0–11.9. Combined measurements of males and females are presented in Table 1.

WEIGHTS.—Holotype 30.5 g; males (15) 29.3 ± 1.92, range 25.5–31.5; females (12) 27.2 ± 2.13, range 24.0–30.5.

DIAGNOSIS.—*S. latistriata* clearly falls in the superspecies of *Stachyris* [*striata*], which consists of *S. striata* from Luzon, *S. nigrorum* from Negros, and *S. hypogrammica* from Palawan (see Frontispiece). Phenotypically it appears more closely related to *S. nigrorum* of nearby Negros, less so to *S. striata,* and farthest from *S. hypogrammica,* which has the black streaks on the breast and belly characteristic of the superspecies but lacks the black band on the forehead. Also, *S. hypogrammica* differs by having the forehead and crown Cinnamon 123A, the back and rump Yellowish Olive Green 50, and the breast and belly bright greenish yellow. In Tables 1 and 2 we have summarized the salient features and measurements that distinguish *S. latistriata* from its closest congeners, *S. nigrorum* and *S. striata. S. latistriata* is clearly the largest of the three species, with highly significant differences (Mann-Whitney *U* Test, $P < 0.01$) between it and the other two in all measurements taken.

ETYMOLOGY.—Named for its characteristic broad black streaks on the breast and belly that are more pronounced than in any of its congeners.

TABLE 1

COMPARISON OF THE SALIENT CHARACTERISTICS THAT DISTINGUISH *STACHYRIS LATISTRIATA* FROM *STACHYRIS NIGRORUM* AND *STACHYRIS STRIATA*

S. latistriata	*S. nigrorum*	*S. striata*
Black band on forehead—broader and more developed	Narrower, less developed	Nearly absent
Black band around auriculars—poorly developed	More developed	Absent
Crown, hind neck and mantle—Greenish Olive 49[a]	Citrine 51	Citrine washed with Clay Color 26
Tail—Greenish Olive	Brussels Brown 121B	Mikado Brown 121C
Wings—Sepia 119 with pale yellow edges	Pale Sepia with olive yellow edges	Paler Sepia with paler yellow edges
Inner edge of secondaries—light yellow	Buffy	Pale buffy
Chin—cream white	Pale yellow	Pale yellow
Throat—cream white with black streaks	Pale yellow without streaks	Pale yellow without streaks
Breast—light Sulphur Yellow 57 becoming Buff Yellow 53 with broad black streaks	Paler with narrow black streaks	Paler with black streaks not as broad
Flanks—Greenish Olive	Pale brownish olive	Paler brownish olive
Shank feathers—Greenish Olive	Light brownish olive	Light brownish olive
Legs and feet—bluish olive	Tannish horn	Tannish horn

[a] Capitalized color names and numbers are from Smithe (1975, 1981).

SPECIMENS EXAMINED.—*Stachyris latistriata*: 9 ♂, 7 ♀ (NMP), 10 ♂, 6 ♀ (CMNH). *S. nigrorum*: 6 ♂, 11 ♀ (FMNH), 1 ♂ (USNM). *S. striata*: 2 ♂ (DMNH), 4 ♂, 2 ♀ (FMNH).

DISCUSSION

Habits and behavior.—The Panay Striped-Babbler was the most common bird in the high elevation forests of Mt. Baloy (Fig. 3) and adjacent peaks. We observed it from approximately 1400 m to the peak of Mt. Baloy at 1900 m; however, the specimen obtained in 1987 was netted at about 1000 m. This altitudinal range closely parallels the presence of mosses in the trees, with moss becoming conspicuous at 1400 m and increasing in presence to true mossy forest (Fig. 4) from 1750 m to the peak. We suspect that the species occupies this habitat throughout the high elevation forests of Panay (Fig. 5). If this is true, its total range spans 96 km with an area less than 738 km^2, the extent of the remaining closed and open canopy forests on Panay (Swedish Space Corp. 1988).

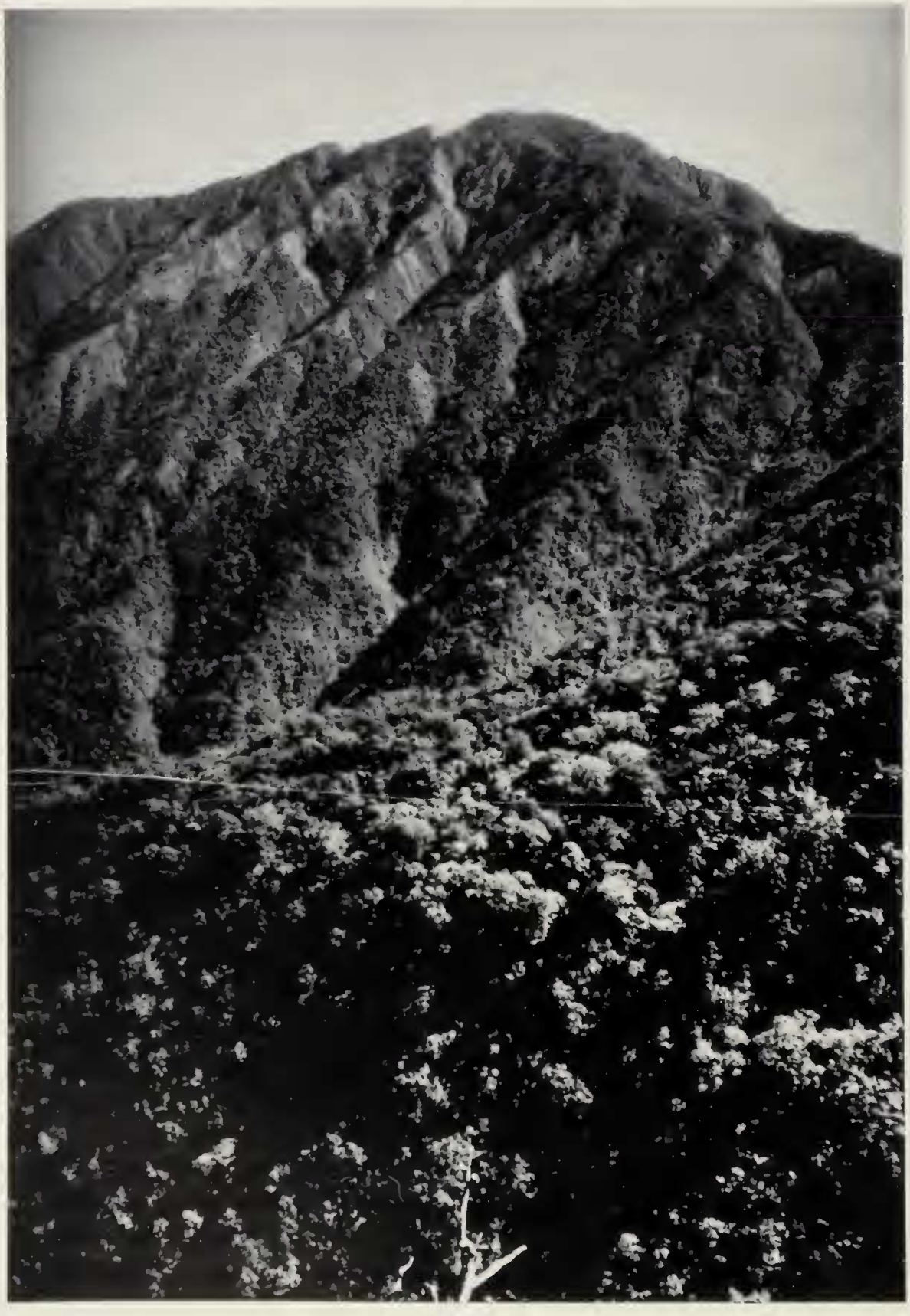

FIG. 3. View of the peak and western slope of Mt. Baloy. The holotype was obtained on the flat ridge below and to the right of the peak.

TABLE 2

MEASUREMENTS OF *STACHYRIS LATISTRIATA*, *STACHYRIS NIGRORUM* AND *STACHYRIS STRIATA*[a]

Measurements (mm)	*S. latistriata* N Mean (SD) Range	*S. nigrorum* N Mean (SD) Range	*S. striata* N Mean (SD) Range
Wing chord	32 70.3 (1.7) 67.3–75.2	18 68.9 (1.3) 66.3–71.7	7 60.2 (1.7) 58.3–63.2
Tail	30 55.2 (1.5) 53.1–58.7	18 52.0 (1.3) 50.3–54.9	7 51.3 (2.3) 48.9–55.3
Tarsus	31 24.1 (0.6) 22.7–25.5	18 23.5 (0.7) 22.0–24.7	8 17.8 (0.7) 16.8–18.6
Culmen	32 20.9 (1.6) 20.1–22.0	18 18.0 (0.9) 15.7–19.6	8 16.2 (0.8) 15.4–18.0
Bill width at feather line	32 5.8 (0.4) 5.3–6.7	18 5.4 (0.2) 5.0–5.8	8 5.2 (0.2) 5.0–5.6
Bill tip to anterior edge of nostril	32 11.4 (0.4) 10.3–12.1	18 10.1 (0.4) 9.1–10.7	8 9.4 (0.4) 9.0–10.2

[a] Highly significant differences (Mann-Whitney *U* Test, $P < 0.01$) exist between *S. latistriata* and *S. nigrorum*, and between *S. latistriata* and *S. striata* for all measurements presented.

We encountered *S. latistriata* singly or in pairs, usually in the middle and upper parts of the canopy from 3 to 12 m from the ground. They apparently do frequent lower vegetation as all 34 specimens (excluding nestlings) were captured in mist nets with the highest trammel usually set about 2.5 m from the forest floor. In at least one case we caught three birds about a meter apart in the middle of a net (1.5 m from the ground), suggesting that they occasionally travel in small groups. We did not observe them participating in mixed species flocks.

We detected these elusive birds in the forest more often by their call notes and song (described below and see Fig. 8) than by sightings. They do respond to artificial alarm and distress calls (known in bird-watching circles as "pishing" and "squeaking") made by an observer but they usually do not stay in view for more than a few seconds. Their posture while perched varies from an upright flycatcher-like stance similar to the posture of the holotype in Fig. 1 to having the head dipped below, or slightly above the level body as in the Frontispiece. Often the head is recoiled giving a "no neck" appearance. The white lores and face with dark line through the eye and the bold black streaks on the breast are this species' best field marks.

FIG. 4. Mossy forest at 1880 m on Mt. Baloy, typical habitat of *Stachyris latistriata.*

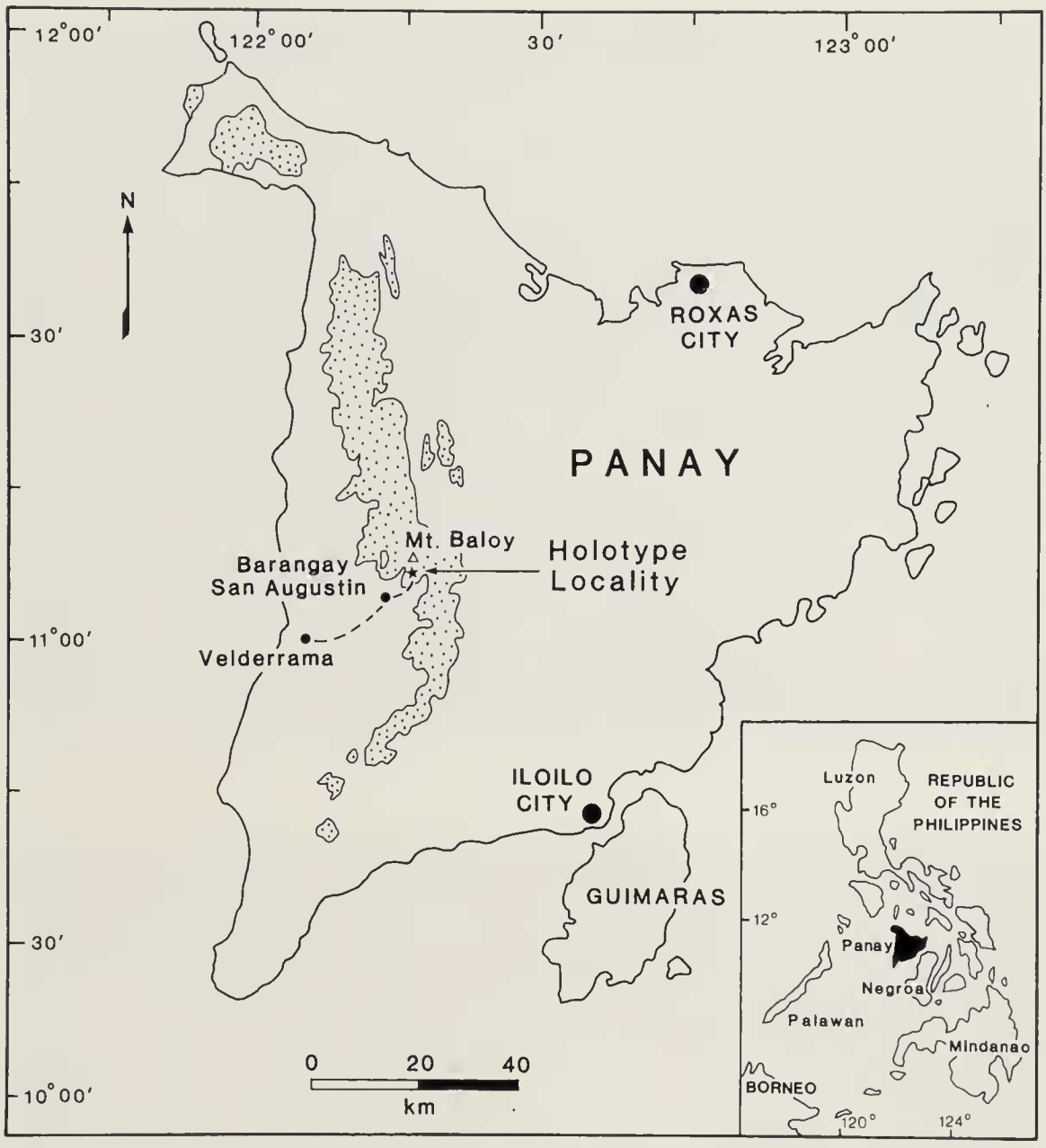

FIG. 5. Map of Panay, Philippines showing the holotype locality (star), Mt. Baloy (triangle), the route to Mt. Baloy (dashed line) and the distribution of the remaining closed and open canopy forest (stippled area) on the island.

Breeding.—Of the specimens whose gonads we measured, 8 of 14 ♀ and 13 of 16 ♂ had enlarged gonads (ovary measuring 6 × 4 to 10 × 4.5 mm; and left testis measuring from 3 × 2 to 6 × 4 mm). Enlarged oviducts were observed in 2 ♀ and a brood patch was noted in the holotype. Only 1 ♀ and 3 ♂ obtained had small gonads, and skull ossification equal to or less than 50%. We believe these were recently fledged young.

On 14 October 1989 Mila Ebreo of our field team found a nest of the Panay Striped-Babbler. The cupped nest (Fig. 6) was suspended among

FIG. 6. Nest of the Panay Striped-Babbler found at 1710 m on Mt. Baloy.

FIG. 7. Close-up of nestling Panay Striped-Babblers.

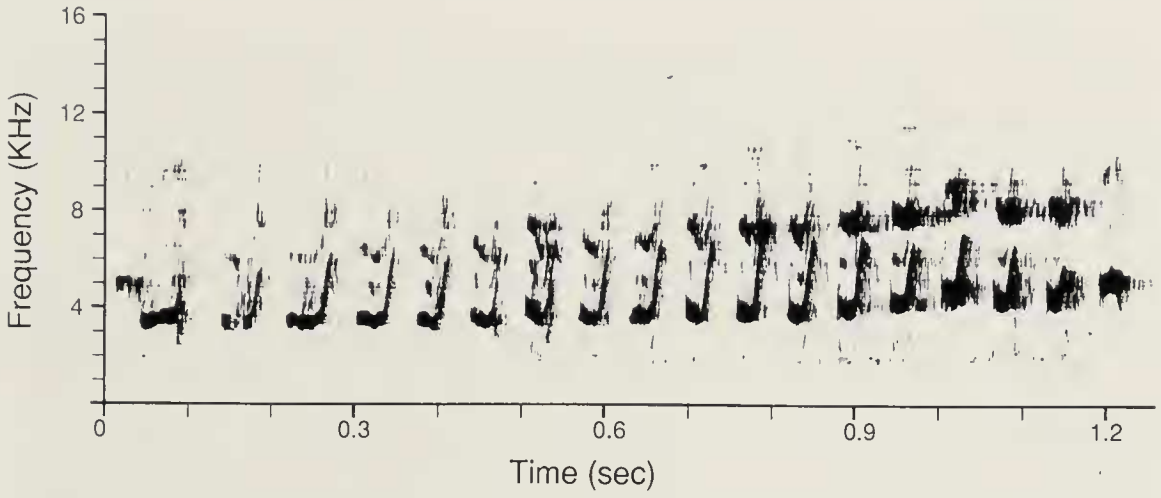

FIG. 8. Sonagram (wide band, 160–16000 Hz) of one of the trills in the song of the Panay Striped-Babbler. Recorded by R. S. Kennedy (LNS 46824) at 1690 m on Mt. Baloy.

5 small branches in the center of the crown (diameter ca 50 cm) of a small tree (*Ficus* sp., Family Moraceae) protruding from the forest canopy on a southern exposed slope. It was ca 5 m from the ground in virgin mossy forest at ca 1710 m. To identify what species the nest belonged to, Kennedy hid in the forest about 15 m away waiting for a parent to arrive. After 10 min, one *Stachyris latistriata* landed on the edge of the nest with a small round white object in its bill. Kennedy could not identify the object but believed it was a seed or small fruit. The team collected the nest and two recently hatched young (Fig. 7) shortly after the nest was identified. It had the following dimensions: overall height—70 mm, outside diameter—90 mm, inside bowl diameter—66 mm, inside depth—45 mm, and was composed of live and dead mosses loosely woven together. The nest bowl was lined with black hair-like roots from epiphytic ferns and larger tan stems from an unidentified orchid.

From gonad size, presence of fledged young in our series and the nest we found, we know the Panay Striped-Babbler was breeding in October. However, we suspect the nesting season was nearly over as testes in males were not greatly enlarged and the largest ova noted in females measured only 1.5 mm in diameter.

Food.—The stomach of NMP 16665 contained the remains of several insects including at least one coleopteran and one cicada (Family Cicadidae). A scat from the holotype contained spherical objects that appeared to be seeds.

Vocalizations.—The song consists of a series of slightly ascending trills sung from perches within the canopy of the forest. One trill (Fig. 8) lasted 1.2 sec. In the first of two recordings made, a solitary bird sang 11 (of a

longer series) trills over 39.6 sec with an average interval between trills of 3.60 sec ± 1.33 sec (range 2.46–7.41 sec). In a second recording, a bird accompanied by a second individual sang 17 trills over 2 min 23.21 sec with an average interval between trills of 8.42 sec ± 7.42 sec (range 3.03–28.32 sec). Interspersed among the long intervals between trills were call notes "tsik" and an occasional chatter-like call.

Molt.—All adult specimens in the series collected in October had one or more rectrices missing or partially grown in. Wing molt was taking place in October as well. We particularly noted wing molt in CMNH 34211, with primary 4 growing in, and in CMNH 34229 with primaries 1 and 6 appearing.

Remarks.—Like *S. nigrorum* and *S. hypogrammica, S. latistriata* is a bird of high elevation (above 1000 m) forests, while *S. striata* is a bird of low and middle elevation forests. *S. latistriata* and *S. striata* often forage singly or in pairs in the middle and upper levels of the forest (Kennedy pers. obs.), while *S. hypogrammica* forage in pairs and often in small groups of 5 or so birds at all levels of the forests (Gonzales pers. obs.). There are no published records of the foraging behavior of *S. nigrorum.* The three members of the superspecies we have seen are all noisy, active birds.

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COLOR PLATE

The Frontispiece painting by John A. Ruthven has been made possible by an endowment established by George Miksch Sutton.